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10/725,027

12/02/2003

Tomoyuki Hiroki

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EXAMINER

DINH, TAN X

ART UNIT

PAPER NUMBER

2627

MAIL DATE

DELIVERY MODE

07/09/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/725,027

Applicant(s)

HIROKI, TOMOYUKI

Examiner

TAN X. DINH

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1) The amendment filed 4/27/2007 is acknowledged.

2) The I.D.S filed 4/27/2007 has been considered by the Examiner. However, the Japan and/or foreign document(s), if they have not been written in English, are considered to the extent that could be understood from the English Abstract and the drawings.

Form PTO-1449 or PTO/SB/08 is(are) attached herein.

3) The certified translation of the original application filed in JAPAN, filed on 4/27/2007 is acknowledged. The rejection under 35 USC 102(e) has been withdrawn here. The following is new ground of the rejection.

4) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

5) (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6) Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by SHIRATORI et al (6,027,825).

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SHIRATORI et al discloses a magnetic domain wall displacement type magneto-optical recording medium as claimed in claim 1, comprising:

a magnetic domain wall displacement layer in which a magnetic domain wall displaces to contribute to information reproduction (Fig.12A, displacement layer 1202);

a memory layer holding a recorded magnetic domain corresponding to the information (Fig.12A, recording/memory layer 1204); and

a switching layer which is arranged between the magnetic domain wall displacement layer and the memory layer and has a Curie temperature lower than Curie temperatures of the magnetic domain wall displacement layer and the memory layer (Fig.12A, switching layer 1203);

wherein a magnitude of a net magnetization of the magnetic domain wall displacement layer in a temperature range from the Curie temperature of the switching layer to the Curie temperature of the magnetic domain wall displacement layer is substantially zero (column 17, line 42 to column 18, line 3. See also figures 12B and 12C, the net magnetization magnetic domain wall displacement layer 1202 (Curie temperature T_{c2}) and switching layer 1203 (Curie temperature T_{c3}) is substantially zero).

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7) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8) Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over SHIRATORI et al (6,027,825).

SHIRATORI et al discloses all the subject matter as claimed in claim 2, except to specifically show that the net magnetization of the magnetic domain wall displacement layer in a temperature range from the Curie temperature of the switching layer to the Curie temperature of the magnetic domain wall displacement layer is 15emu/cc. However, it is old and widely used in the DWDD magneto-optical recording method that the *net magnetization* of the magnetic domain wall displacement layer can be set at any suitable value by *adjusting the composition of the magnetic domain wall displacement layer* (see applicant's specification, page 3). Therefore, one of ordinary skill in the art at the time of the invention was made would have been motivated to set the net magnetization of magnetic domain wall displacement layer in

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MIYAKOSHI et al's magneto-optical recording medium at 15emu/cc as claimed.

As to claim 3 it would have been obvious to use a single or multiple structure for magnetic domain wall displacement layer since they all are the same and perform similar functions with each other.

9) Applicant's arguments with respect to claims 1-3 have been considered but are moot in view of the new ground(s) of rejection.

10) The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Applicant is reminded that in amending in response to a rejection of claims (if the rejection involves with any applicable arts), the patentable novelty must be clearly shown in view of the state of the art disclosed by the references cited and the objection made. Applicant must also show how the amendments avoid such references and objections. See 37 CFR § 1.111(c).

Form PTO-892 is attached herein.

11) Any inquiry concerning this communication or earlier communications from the examiner should be directed to TAN XUAN DINH whose telephone number is (571)272-7586. The examiner can normally be reached on MONDAY to FRIDAY from 9:00AM to 5:00PM.

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The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov/>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



TAN DINH
PRIMARY EXAMINER

June 27, 2007